Operator's Manual

CRAFTSMAN®

3.5 HP. 16-IN.

ELECTRIC CHAIN SAW

Model No. 316.341070

CAUTION: Before using this product, read this manual and follow all safety rules and operating instructions.

- SAFETY
- ASSEMBLY
- OPERATION
- MAINTENANCE
- PARTS LIST

Sears, Roebuck and Co., Hoffman Estates, IL 60179, U.S.A.
Visit our website: www.sears.com/craftsman

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WARRANTY STATEMENT

TWO YEARS LIMITED WARRANTY ON CRAFTSMAN ELECTRIC CHAIN SAW

For two years from the date of purchase, when this Chain Saw is used and maintained according to the operator's manual, Sears will repair any defect in material or workmanship free of charge.

This warranty excludes the bar and chain, which are expendable parts that can wear out from normal use in less than two years.

If this Chain Saw is used for commercial or rental purposes, this warranty applies for only 30 days from the date of purchase.

WARRANTY SERVICE IS AVAILABLE BY RETURNING THIS CHAIN SAW TO THE NEAREST SEARS STORE OR SEARS PARTS & REPAIR CENTER IN THE UNITED STATES.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., Dept. 817WA, Hoffman Estates, IL 60179

RULES FOR SAFE OPERATION

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

SYMBOL	MEANING
	SAFETY ALERT: Indicates danger, warning or caution. Attention is required in order to avoid serious personal injury. May be used in conjunction with other symbols or pictographs.

NOTE: Advises you of information or instructions vital to the operation or maintenance of the equipment.

Read the Operator's Manual(s) and follow all warnings and safety instructions.
Failure to do so can result in serious injury to the operator and/or bystanders.

SYMBOL	MEANING
	DANGER: Failure to obey a safety warning will result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.
	WARNING: Failure to obey a safety warning can result in injury to yourself and others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.
	CAUTION: Failure to obey a safety warning may result in property damage or personal injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

• IMPORTANT SAFETY INSTRUCTIONS •

READ ALL INSTRUCTIONS
PLAN AHEAD

WARNING: If correctly used, the chain saw is a quick, easy to handle and efficient tool; if used improperly or without the due precautions it could become a dangerous tool. For pleasant and safe work,always strictly comply with the safety rules that are contained in this manual.

- Read the instructions carefully. Be familiar with the controls and proper use of the unit.
- Do not operate this unit when tired, ill or under the influence of alcohol, drugs or medication.
- Keep Children away.
- Secure hair above shoulder length. Do not wear loose clothing or jewelry; they can get caught in moving parts.
- Inspect the unit before use. Replace all damaged parts prior to starting. Make sure the unit is in original operating condition before starting.
- Know the controls and know how to stop the chain saw quickly.
- Carry the chain saw with the motor stopped, the guide bar and saw chain to the rear.
- Wear protective gear. Always use steel-toed safety footwear with non-slip soles; snug-fitting clothing; heavy-duty non-slip gloves; eye protection such as non-fogging, vented goggles or face screen; an approved safety hard hat; and hearing protection. Regular users should have hearing checked regularly as chain saw noise can damage hearing.

OPERATE YOUR SAW SAFELY

- Do not operate a chain saw that is damaged, not calibrated properly or not fully assembled. Always replace chain, bar, chain brake, and other parts immediately if damage occurs.
- Do not apply excess force to the chain saw at the end of the cut. You may lose control of the unit when the cut has been completed.
- Keep all parts of your body away from the chain when the engine is running.
- Use the unit only in daylight or good artificial light.

RULES FOR SAFE OPERATION

- Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled. Be sure that the saw's chain stops moving when the trigger is released.
- Use extreme caution when cutting small-sized brush and saplings because slender material may catch the chain saw and whip towards you or cause you to lose control.
- When cutting a limb that is under tension, be alert for springback so that you will not be struck when the tension in the wood fibers is released
- Do not cut through nails, rods in the tree, railroad ties or pallets. Inspect a tree that you are going to cut for foreign objects that could cause injury or damage to your chain saw.
- After striking a foreign object, stop the motor and thoroughly inspect for damage. Repair as necessary.
- We do not recommend using the chain saw in a tree or on a ladder.

MAINTAIN YOUR SAW IN GOOD WORKING ORDER

- All chain saw service, other than the items listed in this instruction manual maintenance instructions, should be performed by a Sears or other qualified service dealer.
- Make sure all fasteners are in place and secure.
- Unauthorized replacement parts or the removal of safety devices may cause damage to the unit and possible injury to the operator or bystanders. Use only Craftsman accessories and replacement parts as recommended. Never modify your saw.
- When not in use, saw should be stored in a dry, highly secure location away from children.
- All chain saw service, other that the items listed in this instruction manual maintenance instructions, should be performed by a Sears or other qualified service dealer.
- Use the right tool. Only use this chain saw for its intended purpose, to cut wood.
- Do not overreach. Always keep proper footing and balance.
- Always hold the unit with both hands when operating. Keep a firm grip on all handles or grips.
- Apply chain brake prior to any repositioning of the operator in the cutting area. As an additional safety precaution, apply the chain brake prior to setting down the saw.
- Never touch the chain or attempt to service the saw while the motor is running. Make sure all moving parts have stopped. Allow the chain saw to cool, as the chain can be hot.
- Check the bar and chain at frequent intervals for proper adjustment. Make sure the bar and chain are properly tightened and sharpened. Visually inspect for damage. Repair any damage before restarting or operating the chain saw.

WARNING: KICKBACK may occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain in the cut. Tip contact in some cases may cause a lightning-fast reverse reaction, kicking the guide bar up and back towards the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back toward the operator. Either of these reactions may cause you to lose control of the saw, which could result in serious personal injury.

Do not rely exclusively upon the safety devices built into your saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury.

KICKBACK SAFETY PRECAUTIONS

- With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents. Be alert to the potential for kickback at all times.
- Keep a good firm grip on the saw with both hands, the right hand on the rear handle and the left hand on the front handle, when the motor is running. Use a firm grip with thumbs and fingers encircling the chain saw handles. A firm grip will help you reduce kickback and maintain control of the saw. Don't let go.
- Make sure that the area in which you are cutting is free from obstructions. Do not let the nose of the guide bar contact a log, branch, fence, or any other obstruction that could be hit while you are operating the saw.
- Always cut with the motor running at full speed. Fully squeeze the trigger and maintain a steady cutting speed.
- Use only the correct original equipment manufacturer replacement bars, chains and other parts and accessories. These are available from a Sears or other qualified service dealer. Use of any unauthorized parts or accessories could lead to serious injury to the user, or damage to the unit, and will void your warranty.
- Follow the manufacturer's sharpening and maintenance instructions for the saw chain.
- Use only the replacement guide bars and low kickback chains specified for your saw to avoid injury.
- Watch for shifting logs or other forces that could pinch or fall into chain.
- Always have saw at full speed when entering a previous cut. Always use caution when entering a previous cut.
- Do not start a cut using the tip of the saw.

RULES FOR SAFE OPERATION

OTHER SAFETY PRECAUTIONS

- Do not operate a chain saw with one hand! Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation. A chain saw is intended for two-handed use.
- Do not operate a chain saw if you are fatigued.
- Use safety footwear; snug-fitting clothing; protective gloves; and eye, hearing, and head protection devices.
- Do not allow other persons to be near the chain saw when starting or cutting with the chain saw. Keep bystanders and animals out of the work area.
- Do not remove, damage or de-activate any of the safety devices. Never use a damaged, modified, or improperly repaired or assembled chain saw. Check their proper operation regularly. See chain replacement under *Maintenance and Repair Instructions.*
- Never carry out operations or repairs on your own that are other than routine maintenance as listed in this manual.
- Use caution when felling a tree. Make sure you have planned an escape path when felling, and keep all bystanders away.
- Be alert; stop the machine if anyone enters the cutting area, which is usually 3 to 4 feet around the operator.
- Use caution when working in a crew to avoid injury to a fellow worker who may enter the cutting area.
- Keep these instructions. Refer to them often and use them to instruct other users. If you loan this unit to others, also loan these instructions to them.
- Store the unit in a dry place, secured, or at a height to prevent unauthorized use or damage. Keep out of reach of children.
- Never douse or squirt the unit with water or any other liquid. Keep handles dry, clean and free from debris. Clean after each use.
- Do not use the unit in the rain, in a storm or in inclement weather.

ELECTRICAL SAFETY WARNINGS

- Since the tool is double-insulated, a 2-wire extension cord (an extension cord without a ground) may be used. A 3-wire extension cord (an extension cord with a ground) that uses a NEMA type connector (parallel blade, U ground) is recommended. Extension cords are available at Sears or other retailers. Use only round-jacketed extension cords approved for outdoor use.
- This tool is double-insulated. Repair or replace damaged cords.
- To reduce the risk of electrical shock, this unit has a polarized plug (one blade is wider than the other). This unit will fit with a polarized plug in one way only. If the plug does not fit fully into the unit, reverse the plug. If it still does not fit, use a cord with the correct connection. Do not modify the unit in any way.

WARNING: To reduce the risk of electrical shock, use only SW-A, SOW-A, STW-A, STOW-A, SJW-A, SJOW-A, SJTW-W or SJTOW-A cord types.

RULES FOR SAFE OPERATION

ELECTRICAL SAFETY WARNINGS (CONT'D)

- **CORD SETS:** Make sure your cord set is in good condition, with a cord that is heavy enough to carry the current that your unit will draw. An undersized cord set will cause a drop in line voltage resulting in a loss of power, as well as overheating. The table shown below illustrates the correct size to use depending on the cord length and nameplate amperage rating. If in doubt, use the next heavier size line gauge. The smaller the gauge number, the heavier the cord. To prevent the cord from disconnecting from the unit, use the cord hook shown in the *Starting/Stopping Instructions.*
- Ground Fault Circuit Interrupter (GFCI) protection should be provided on the circuit(s) or outlet(s) that will be used for the unit. Use receptacles with built-in GFCI protection for an extra measure of safety.
- Avoid dangerous environments. Never operate your unit in damp or wet conditions. Moisture is a shock hazard.
- Inspect all extension cords and the unit power connection periodically. Look closely for deterioration, cuts or cracks in the insulation. Also inspect the connections for damage. Repair or replace the cords if any defects appear.
- Do not handle the plug or the unit with wet hands.
- Examine the electrical switches. Do not use the chain saw if the switches do not properly turn on and off. Do not attempt to make any repairs to the electric switches. Take your saw to a Sears or other qualified service dealer.
- Keep the cord away from the cutting area and to position cord so that it will not be caught on branches, and the like, during cutting.
- This electric powered saw is classified accroding to CAN/CSA Z62.1-03 as a Class 2C saw. It is intended for infrequent use by homeowner's, cottagers and campers, and for such general applications such as clearing, pruning, cutting firewood, etc. It is not intended for prolonged use. If the intended use involves prolonged periods of operation, this may cause circulatory problems in the user's hands due to vibration. It may be appropriate to use a saw having an anti-vibration feature.

Minimum Gauge Wire					
Saw Model	**Ampere Rating**	**Volts AC**	**Length of Power Cord**		
			25 ft. / 7.5m	**50 ft. / 15m**	**100 ft. / 30m**
34107	13.5	110 / 120	16 Gauge	16 Gauge	14 Gauge

SAVE THESE INSTRUCTIONS

RULES FOR SAFE OPERATION

SAFETY AND INTERNATIONAL SYMBOLS

This operator's manual describes safety and international symbols and pictographs that may appear on this product. Read the operator's manual for complete safety, assembly, operating and maintenance and repair information.

SYMBOL **MEANING**

- **SAFETY ALERT SYMBOL**

  Indicates danger, warning, or caution. May be used in conjunction with other symbols or pictographs.

- **READ OPERATOR'S MANUAL**

WARNING: Read the Operator's Manual(s) and follow all warnings and safety instructions. Failure to do so can result in serious injury to the operator and/or bystanders.

- **WEAR EYE, HEARING AND HARD-HAT PROTECTION**

WARNING: Thrown objects and loud noise can cause severe eye injury and hearing loss. Wear eye protection meeting ANSI Z87.1-1989 standards and ear protection when operating this unit. Wear a hard hat. Use a full face shield when needed.

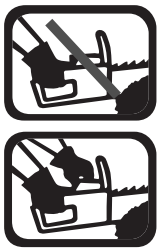
- **DO NOT USE IN THE RAIN**

WARNING: Avoid dangerous environments. Never operate your unit in the rain, or in damp or wet conditions. Moisture is a shock hazard.

SYMBOL **MEANING**

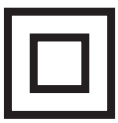
- **GUIDE BAR**

WARNING: Contact of the guide bar tip with any object should be avoided. Tip contact may cause the guide bar to move suddenly upward and backward, which may cause serious injury. Avoid bar nose contact.



- **USE BOTH HANDS**

Always use both hands while operating the chain saw. Never use only one hand to operate the saw.

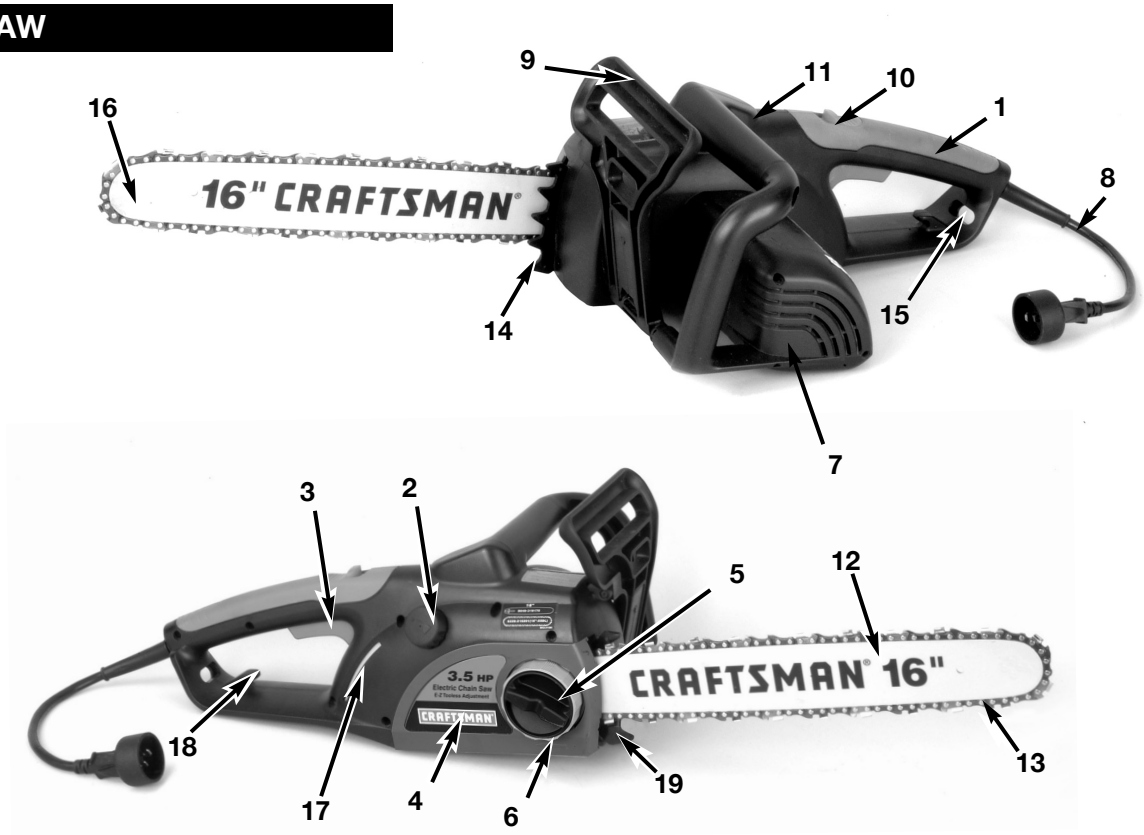


- **DOUBLE INSULATED**

Two systems of insulation are provided instead of grounding. There is no grounding provided and no means of grounding should be added to this unit.

RULES FOR SAFE OPERATION

KNOW YOUR SAW



CHAIN SAW COMPONENTS

1. REAR HANDLE
2. OIL RESERVOIR CAP
3. TRIGGER START/STOP SWITCH
4. SPROCKET COVER
5. BAR BOLT KNOB
6. CHAIN TENSION RING
7. ELECTRIC MOTOR
8. ELECTRIC CORD
9. CHAIN BRAKE® LEVER / HAND GUARD
10. LOCK / OFF BUTTON
11. FRONT HANDLE
12. GUIDE BAR
13. SAW CHAIN
14. BUCKING SPIKES
15. CORD RETAINER HOLE
16. SPROCKET TIP
17. OIL RESERVOIR WINDOW
18. CORD RETAINER
19. CHAIN CATCHER

SAFETY FEATURES

Numbers preceding the descriptions correspond with the numbers above to help you locate the safety feature.

3. TRIGGER START / STOP SWITCH stops saw motor when released.
7. ELECTRIC MOTOR is double insulated for added safety.
9. CHAIN BRAKE® LEVER / HAND GUARD protects the operator's left hand in the event it slips off the front handle while saw is running.
10. LOCK / OFF BUTTON prevents accidental acceleration of the saw motor. The trigger cannot be squeezed unless lock/off button is depressed.
13. LOW KICKBACK SAW CHAIN helps significantly reduce kickback, or the intensity of kickback, due to specially designed depth gauges and guard links.
19. CHAIN CATCHER reduces the danger of injury in the event saw chain breaks or derails during operation. The chain catcher is designed to intercept a whipping chain.

KICKBACK SPECIFICS

WARNING: Kickback can lead to dangerous loss of control of the chain saw and result in serious or fatal injury to the saw operator or to anyone standing close by. Always be alert. Rotational kickback and pinch-kickback are major chain saw operational dangers and the leading cause of most accidents.

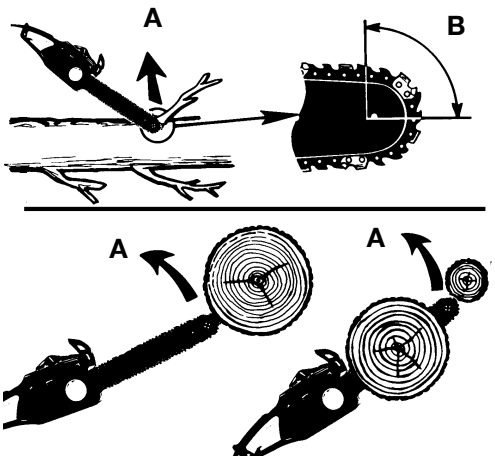
KICKBACK may occur when the NOSE or TIP of the guide bar touches an object, or when wood closes in and pinches the saw chain in the cut.

Tip contact in some cases may cause a lightning-fast reverse reaction, kicking the guide bar up and back toward the operator.

Any of these reactions may cause you to lose control of the saw, which could result in serious personal injury.

Rotational Kickback

Rotational Kickback can occur when the moving chain contacts an object at the upper tip of the guide bar. This contact can cause the chain to dig into the object, which stops the chain for an instant. The result is a lightning fast, reverse reaction which kicks the guide bar up and back toward the operator.



A = Kickback path
B = Kickback reaction zone

Fig. 1

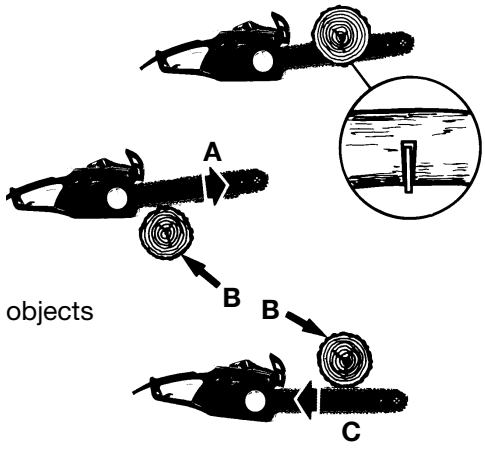
KICKBACK SPECIFICS

Pinch Kickback

Pinch kickback can occur when the saw chain is pinched along the bottom or top of the guide bar.

When pinched on the bottom of the guide bar, it may pull the saw forward, away from the operator.

When pinched along the top of the guide bar, it may push the guide bar rapidly back toward the operator.



A = Pull
B = Solid objects
C = Push

Fig. 2

STARTING/STOPPING INSTRUCTIONS

WARNING: Never operate the saw without the bar and chain properly installed.

STOPPING INSTRUCTIONS

The saw motor will automatically stop when the trigger is released. To restart the motor, you will have to depress the LOCK/OFF button and squeeze the trigger.

STARTING INSTRUCTIONS

1. Fill the oil reservoir with correct chain and bar oil (Fig. 3). Use a funnel, wipe up any spills and make sure no dirt gets into the tank.

NOTE: The saw chain requires lubrication when in use to minimize friction with the guide bar. The oil tank holds 4.5 ozs of oil, enough to lubricate the chain for 12-15 minutes of sawing. We recommend using Craftsman Bar and Chain Lubricant, which contains additives to reduce friction wear and reduce resin residue formations.

CAUTION: The oil reservoir level should be frequently checked during operation to avoid starving the bar and chain of lubrication.

NOTE: Your chain saw is equipped with an Automatic Oiler system and is the ONLY source of lubrication for the bar and chain.

2. **Be certain the Chain Brake® is disengaged** before starting unit (Fig. 4). Disengage it by pulling backward toward the motor.
3. Hook the extension cord to the extension cord retainer (A) (Fig. 5) that is built into the rear handle. This will prevent the cord from pulling out of the handle. Double the extension cord, about a foot from the end, and insert it through the hole at the end of the handle. Hook the loop formed by doubling the cord over the tab. Gently tug on the cord to ensure that it is firmly retained in the saws handle. Plug the receptacle end of the extension cord into the tool's power supply cord.
4. Perform Chain Brake Test which is located in the *Maintenance and Repair Instructions*.

WARNING: Ensure the extension cord is of the proper size and type for your saw.

5. Grip the saw with both hands, left hand holding the front handle (DO NOT HOLD CHAIN BRAKE®) and the right hand holding the rear handle. Thumbs and fingers should encircle both handles (Fig. 6).

WARNING: Make sure the extension cord does not come in contact with the guide bar and saw chain.

6. With your right thumb, push forward the LOCK/OFF button (C) on the top of the rear handle, and at the same time squeeze the trigger. To stop the saw, release the trigger (Fig. 7).

NOTE: It is not necessary to maintain pressure on the LOCK/OFF button once the trigger is squeezed and the motor is running. The LOCK/OFF button is a safety device to avoid accidental starting.

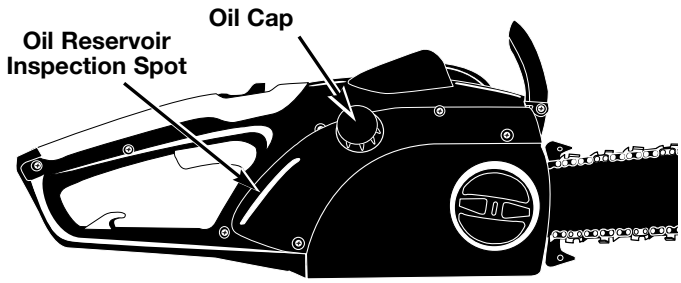


Fig. 3

Fig. 4

Fig. 5

Fig. 6

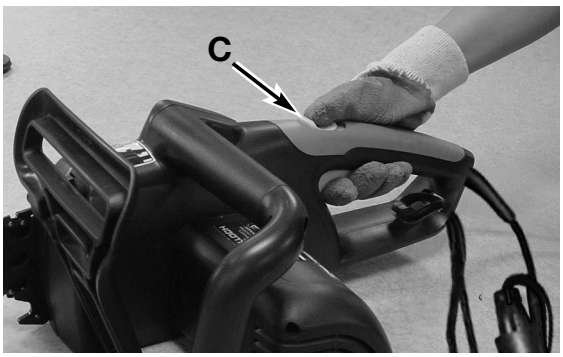


Fig. 7

OPERATING INSTRUCTIONS

FELLING

Felling is the term for cutting down a tree. Small trees up to 6-7 inches (15-18cm) in diameter are usually cut in a single cut. Larger trees require notch cuts. Notch cuts determine the direction the tree will fall.

WARNING: A retreat path (A) should be planned and cleared as necessary before cuts are started. The retreat path should extend back and diagonally to the rear of the expected line of fall, as illustrated in Fig. 8.

CAUTION: If felling a tree on sloping ground, the chain saw operator should keep on the uphill side of the terrain, as the tree is likely to roll or slide downhill after it is felled.

NOTE: Direction of fall (B) is controlled by the notching cut. Before any cuts are made, consider the location of larger branches and natural lean of the tree to determine the way the tree will fall.

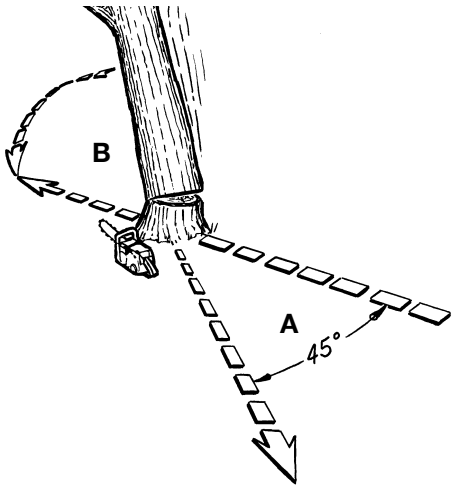


Fig. 8

WARNING: Do not cut down a tree during high or changing winds or if there is a danger to property. Consult a tree professional.Do not cut down a tree if there is a danger of striking utility wires; notify the utility company before making any cuts.

Normally felling consists of 2 main cutting operations, notching (C) and making the felling cut (D) (Fig. 9).

Start making the upper notch cut (C) on the side of the tree facing the felling direction (E). Be sure you don t make the lower cut too deep into the trunk(Fig. 9).

The notch (C) should be deep enough to create a hinge (F) of sufficient width and strength. The notch should be wide enough to direct the fall of the tree for as long as possible (Fig. 9).

WARNING: Never walk in front of a tree that has been notched.

Make the felling cut (D) from the other side of the tree and 1.5 - 2.0 inches (3-5 cm) above the edge of the notch (C) (Fig. 9).

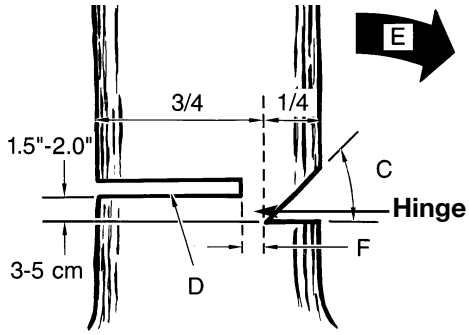


Fig. 9

Never saw completely through the trunk. Always leave a hinge. The hinge guides the tree. If the trunk is completely cut through, control over the felling direction is lost.

WARNING: Before making the final cut, always recheck the area for bystanders, animals or obstacles.

Insert a wedge or felling lever in the cut well before the tree becomes unstable and starts to move. This will prevent the guidebar from binding in the felling cut if you have misjudged the falling direction. Make sure no bystanders have entered the range of the falling tree before you push it over.

Felling Cut:

1. Use wooden or plastic wedges (G) to prevent binding the bar or chain (H) in the cut. Wedges also control felling (Fig. 10).
2. When diameter of wood being cut is greater than the bar length, make 2 cuts as shown (Fig. 11).

WARNING: As the felling cut gets close to the hinge, the tree should begin to fall. When tree begins to fall, remove saw from cut, stop motor, put chain saw down, and leave area along retreat path (Fig. 8).

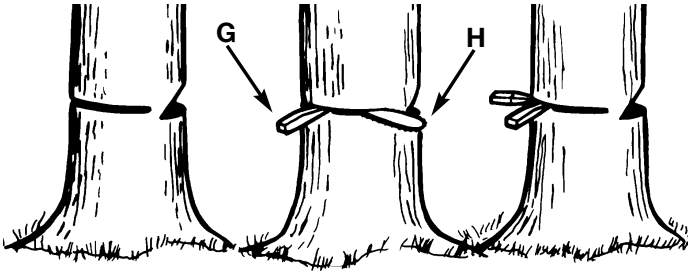


Fig. 10

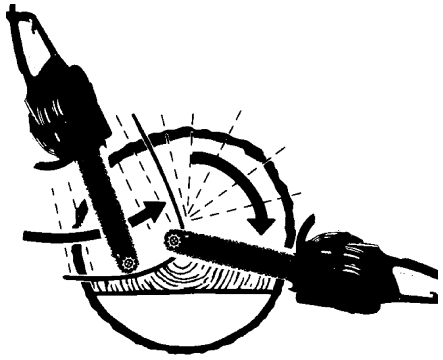


Fig. 11

LIMBING

Limbing a tree is the process of removing the branches from a fallen tree. Do not remove supporting limbs (A) until after the log is bucked (cut) into lengths (Fig. 12). Branches under tension should be cut from the bottom up to avoid binding the chain saw.

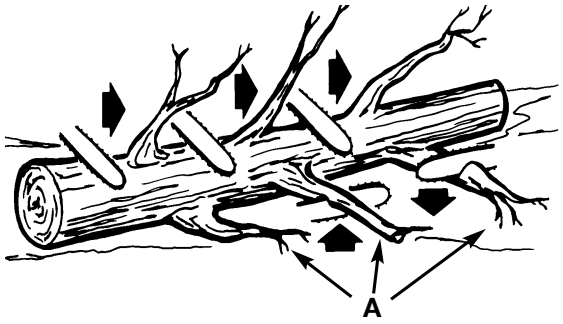


Fig. 12

WARNING: Never cut tree limbs while standing on a tree trunk.

BUCKING

Bucking is cutting a fallen log into lengths. Make sure you have a good footing and stand uphill of the log when cutting on sloping ground. If possible, the log should be supported so that the end to be cut off is not resting on the ground. If the log is supported at both ends and you must cut in the middle, make a downward cut halfway through the log and then make the undercut. This will prevent the log from pinching the bar and chain. Be careful that the chain does not cut into the ground when bucking as this causes rapid dulling of the chain.

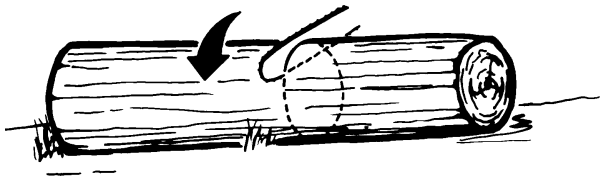


Fig. 13

When bucking on a slope, always stand on the uphill side.

1. Log supported along entire length: Cut from top (overbuck), being careful to avoid cutting into the ground (Fig. 13).
2. Log supported on one (1) end: First, cut from bottom (underbuck) 1/3 diameter of log to avoid splintering. Second, cut from above (overbuck) to meet first cut and avoid pinching (Fig. 14).
3. Log supported on both ends: First, overbuck 1/3 diameter of log to avoid splintering. Second, underbuck to meet first cut and avoid pinching (Fig. 15).

NOTE: The best way to hold a log while bucking is to use a sawhorse. When this is not possible, the log should be raised and supported by the limb stumps or by using supporting logs. Be sure the log being cut is securely supported.

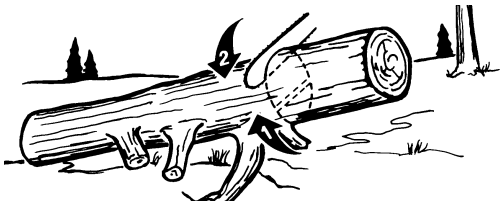


Fig. 14

Fig. 15

BUCKING USING A SAWHORSE

For personal safety and ease of cutting, the correct position for vertical bucking is essential (Fig. 16).

A. Hold the saw firmly with both hands and keep the saw to the right of your body while cutting.
B. Keep the left arm as straight as possible.
C. Keep weight on both feet.

CAUTION: While the saw is cutting, be sure the chain and bar are being properly lubricated.

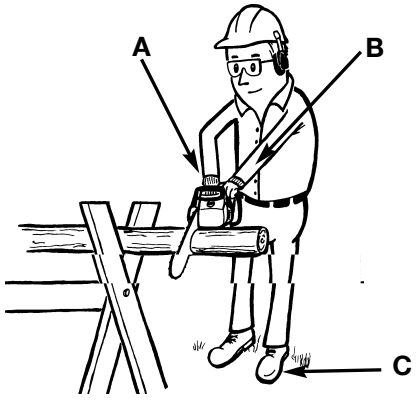


Fig. 16

MAINTENANCE AND REPAIR INSTRUCTIONS

MAINTENANCE SCHEDULE

Perform these required maintenance procedures at the frequency stated in the table. These procedures should also be a part of any seasonal tune-up.

WARNING: To prevent serious injury, never perform maintenance or repairs with unit running. Always service and repair a cool unit.

A good preventive maintenance program of regular inspection and care will increase life and improve performance of your chain saw. This maintenance checklist is a guide for such a program.

Cleaning, adjustment, and part replacement may be required, under certain conditions, at more frequent intervals than those indicated.

CUSTOMER RESPONSIBILITY

MAINTENANCE CHECKLIST		AFTER EACH USE	HOURS OF OPERATION	
ITEM	BEFORE EACH USE		10	20
CHECK FOR LOOSE SCREWS/ NUTS/BOLTS	✔			
CHECK GUIDE BAR AND CHAIN OIL	✔	✔		
CLEAN UNIT AND INSPECT DECALS		✔		
CHECK CHAIN BRAKE® COMPONENTS		✔		
CHECK GUIDE BAR GROOVE			✔	
CHECK CHAIN TENSION	✔			
CHECK CHAIN SHARPNESS	✔			
LUBRICATE SPROCKET TIP		✔		
CHECK FOR DAMAGED / WORN PARTS	✔			

MAINTENANCE AND REPAIR INSTRUCTIONS

REPLACING THE GUIDE BAR

CAUTION: Disconnect the chain saw from power source before checking or adjusting the chain saw tension.

These instructions are for replacing a bar. The unit is fully assembled when shipped.

NOTE: Always wear heavy gloves when handling the saw chain.

Remove Old Bar

1. Place the power unit on a flat surface, on its side with chain tensioner facing up.
2. Loosen knob (B) slightly by turning knob counter-clockwise and then turn the chain tension ring (C) counter-clockwise to relieve chain tension (Fig. 17).
3. To remove the sprocket cover (A), turn knob (B) completely counter-clockwise. (Fig. 17)
4. Remove saw chain from around the guide bar (E) and the sprocket (F). Slide the guide bar (E) with tension plate (D) attached, from the unit. (Fig. 18)
5. Remove screw with lock washer (G) from the tension plate (D) to remove plate from the old bar. Then attach tension plate (D) to the new bar using screw with lock washer (G). Tighten securely with Phillips screw driver (Fig. 19).

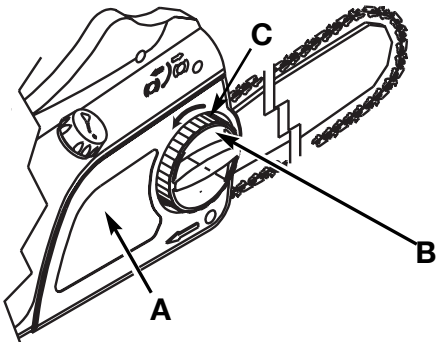


Fig. 17

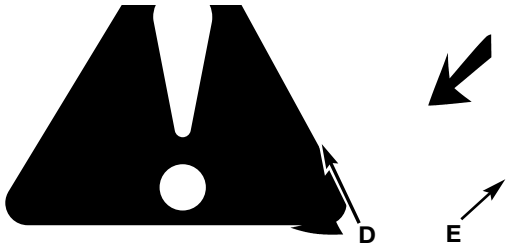


Fig. 18

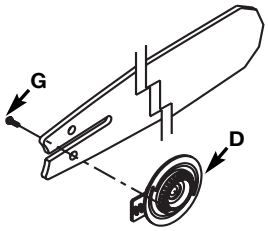


Fig. 19

Install Saw Chain

WARNING: Always use protective gloves when handling the saw chain.

1. Spread the chain out with the cutting edges (H) of the chain pointing in the DIRECTION OF ROTATION.
2. Fit chain into groove of guide bar.

   NOTE: The chain must be installed in the correct direction (Fig. 20).

Install New Bar

1. Install bar and chain on to power unit. Turn the tension plate (D) counter-clockwise until chain fits around sprocket (F) and guide bar (E) (Fig. 20A).
2. Install sproket cover (A) on to power unit (Fig. 20B)
3. For final adjustment, hold the tip of the bar (E) up and tighten chain tension ring (C). Then tighten the knob (B) (Fig.21).
4. Follow the tension adjustment instructions in the next section.

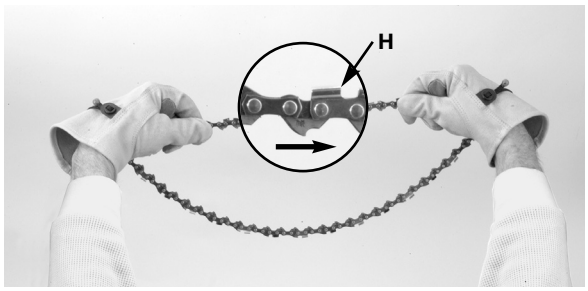


Fig. 20

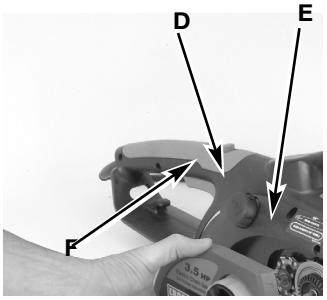


Fig. 20A

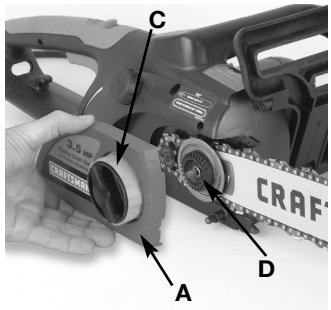


Fig. 20B

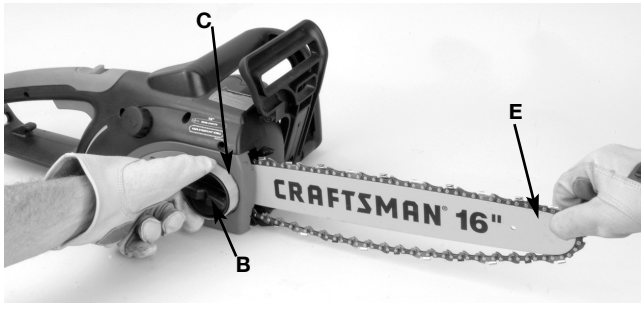


Fig. 21

MAINTENANCE AND REPAIR INSTRUCTIONS

SAW CHAIN TENSION ADJUSTMENT

WARNING: Always use protective gloves when handling the saw chain.

Proper tension of saw chain is extremely important and must be checked before starting, as well as during any cutting operation.

Taking the time to make needed adjustments to the saw chain will result in improved cutting performance and prolonged chain life.

NOTE: A new chain and bar will need readjustment after as few as 5 cuts. This is normal during the break-in period, and the interval between future adjustments will lengthen quickly (Fig. 22).

CAUTION: If saw chain is TOO LOOSE or TOO TIGHT, the sprocket, bar, chain, and crankshaft bearings will wear more rapidly. Study Fig. 22 for information concerning correct cold tension (A), correct warm tension (B), and as a guide for when saw chain needs adjustment (C).

NOTE: Make sure the Chain Brake® is disengaged.

Disengage the Chain Brake® (D) by pulling it backward (Fig. 23).

1. Tensioning the chain can be accomplished with relative ease. Turn knob (E) counter clockwise. Then turn ring (F) counter-clockwise to loosen chain or clockwise to tighten chain (Fig. 24).

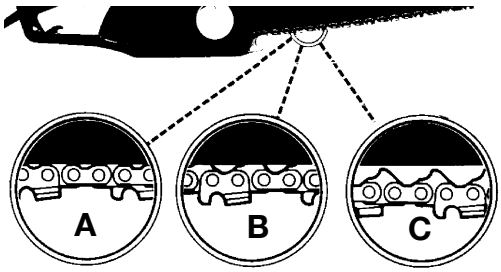


Fig. 22

Fig. 23

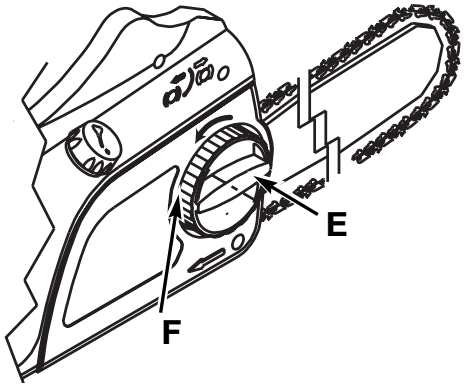


Fig. 24

2. After adjustment and while wearing heavy duty work gloves, move the saw chain back and forth on the guide bar to be sure the chain moves freely and is in proper mesh with sprocket.

NOTE: If the chain is difficult to rotate or if it binds on the guide bar, too much tension has been applied and must be adjusted as described in step 1.

3. While applying tension to the chain, hold the tip of the bar up and then tighten the knob (E).

MAINTENANCE AND REPAIR INSTRUCTIONS

CHAIN AND BAR LUBRICATION

Adequate lubrication of the saw chain during cutting operations is essential to minimize friction with the guide bar.

Your chain saw is equipped with an automatic oiler system. The oiler automatically delivers the proper amount of oil to the bar and chain. There is no flow adjustment.

You can check the oil reservoir level using the oil reservoir window (D) provided on the right side of the saw. The reservoir is full when oil is at the top of the window (Fig. 25).

Fig. 25

CAUTION: Never starve the bar and chain of lubrication oil. Running the saw DRY or with TOO LITTLE OIL will decrease cutting efficiency, shorten chain saw life, and cause rapid dulling of the chain and excessive wear of the bar from overheating. Too little is evidenced by smoke or bar discoloration.

NOTE: The saw chain stretches during use, particularly when it is new, and occasional adjustment will be needed. A new chain requires more frequent adjustment during the break-in period. This is normal. See Section *Saw Chain Tension Adjustment* for instructions.

WARNING: A loose chain can jump off the bar while you are cutting, as well as wear the bar and chain. A chain that is too tight can damage the saw. Either situation, chain too loose or too tight, could cause serious personal injury.

CHAIN BRAKE® / HAND GUARD

This chain saw is equipped with chain brake/hand guard. The Hand Guard protects your left hand in the event it slips off the front handle.

The Chain Brake® is a safety feature which is activated if pressure is applied against the guard or when, in the event of kickback, the operator's hand strikes the lever. When the Chain Brake® is activated, chain movement abruptly stops and the power supply to the motor is immediately cut off.

The purpose of the Chain Brake® is to reduce the possibility of injury due to kickback. The Chain Brake® cannot, however, provide the measure of intended protection if the saw is carelessly operated.

The Chain Brake® is disengaged (chain can move) when the brake is pulled back and locked. This is the normal running position (Fig. 26).

Fig. 26

The Chain Brake® is engaged (chain cannot move) when the brake is in forward position (Fig. 27).

NOTE: The motor will not start if the Chain Brake® is in the engaged position.

Fig. 27

CAUTION: The Chain Brake® should not be used for starting and stopping the saw during normal operation

MAINTENANCE AND REPAIR INSTRUCTIONS

CHAIN BRAKE® TEST

Before cutting with your saw, the Chain Brake® should be tested as follows:

A. Make sure the Chain Brake® is disengaged (Fig. 26).

B. Place the saw on a firm, flat, dry surface that is clear of any debris. Do not let the saw come in contact with any objects.

C. Plug the unit into the power source.

D. Grasp the front handle (not the Chain Brake®/Hand Guard Lever) with your left hand. Thumb and fingers should encircle the handle.

E. Grasp the rear handle with your right hand. Thumb and fingers should encircle the handle.

F. Slide the LOCK/OFF button with your right thumb. Squeeze the trigger with your index finger (Fig. 7).

G. While the motor is running, activate the Chain Brake® by rolling your left hand forward against the lever.

H. Chain and motor should stop abruptly.

WARNING: If the chain and motor fail to stop when the Chain Brake® is engaged, take the saw to a Sears or other qualified service dealer. Do not use the saw if the Chain Brake® is not in proper working order.

EXTENSION CORDS

When using an electric chain saw, plug it into the extension cord only when you are ready to cut wood. Connect the extension cord to a 110/120 voltage outlet. Refer to the Electrical Safety Warnings section.

CAUTION: A cord that is hot to the touch is overloaded.

WARNING: Do not operate your chain saw in a wet or damp environment. Do not expose the saw to rain, snow or sleet. Moisture will cause short circuits. Replace or repair any damaged or frayed extension cords before using your saw. Keep the cord away from the cutting area and position the cord so that it will not be caught on branches or other objects during cutting.

DOUBLE INSULATION

WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS.

Information

Do not use if the cord or plug is damaged. Your appliance is double insulated to help protect against electric shock. Double insulation construction consists of 2 separate “layers” of electrical insulation.

Appliances built with this insulation system are not intended to be grounded. As a result, the extension cord used with your appliance can be plugged into any conventional 120 volt electrical outlet.

Normal safety precautions must be observed when operating an electrical appliance. The double insulation system is only for added protection against injury resulting from a possible internal electrical insulation failure.

WARNING: Your double insulated appliance has no serviceable parts inside. Do not attempt to repair it yourself. For service information, take the saw to a Sears or other qualified service dealer.

In this double insulated appliance, 2 systems of insulation, instead of grounding, are provided. No grounding means is provided on a double insulated appliance, nor should a means for grounding be added to the appliance. No serviceable parts are inside. A double insulated appliance is marked with the words, “DOUBLE INSULATION” or “DOUBLE INSULATED.” The symbol (square within a square) may also be marked on the appliance.

Maintenance

1. Place switch in OFF position and unplug the power supply before the appliance is serviced, cleaned, or maintenance is performed.
2. Keep the air intake clean and air vents free of debris to avoid overheating the motor.
3. Clean with a damp sponge and mild soap. Do not squirt with a water hose or douse with water or other liquids.
4. Inspect the saw chain for proper tension before each use and frequently during cutting. Sharpen as required. Refer to the Chain Sharpening in *Maintenance and Repair Instructions.*
5. Clean the guide bar and bar pad to ensure free path for oil.
6. No motor lubrication is necessary. The motor is equipped with lifetime lubricated bearings.
7. If the saw does not operate, turn switch to OFF position and disconnect the extension cord, first from the power supply, then from the saw. Check the power supply for blown fuses or tripped circuit breakers. If it still does not operate, take the saw to a Sears or other qualified service dealer.

NOTE: Do not attempt to repair saw yourself. No serviceable parts are inside.

MAINTENANCE AND REPAIR INSTRUCTIONS

GUIDE BAR MAINTENANCE

Frequent lubrication of the guide bar is required. Proper maintenance of the guide bar, as explained in this section, is essential to keep your saw in good working condition.

WARNING: Ensure that the power cord is disconnected before performing any maintenance on your saw.

Sprocket Tip Lubrication

CAUTION: The sprocket tip on your new saw has been pre-lubricated at the factory. Failure to lubricate the guide bar sprocket tip as explained below will result in poor performance and seizure, voiding the manufacturer's warranty.

Lubrication of the sprocket tip is recommended after each saw use. Always thoroughly clean guide bar sprocket tip before lubrication.

The Lube Gun (not included) is recommended for applying grease to the guide bar sprocket tip. The Lube Gun is equipped with a needle nose tip which is necessary for the efficient application of grease to the sprocket tip.

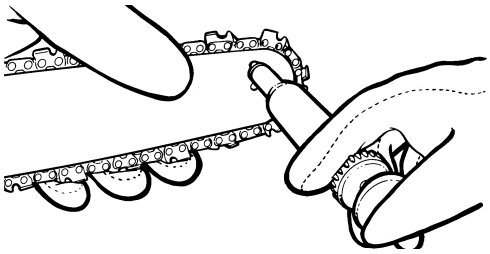


Fig. 28

To lubricate the sprocket tip:

1. Unplug the chain saw from the power source.

NOTE: It is not necessary to remove the saw chain to lubricate the guide bar sprocket tip. Lubrication can be done on the job.

WARNING: Always use protective gloves when handling the saw chain.

2. Clean the guide bar sprocket tip.
3. Using the Lube Gun (optional), insert tip of lube gun into the lubrication hole and inject grease until it appears at outside edge of sprocket tip (Fig. 28).
4. Make sure that the Chain Brake® is deactivated. Rotate saw chain by hand. Repeat lubrication procedure until the entire sprocket tip has been greased.

Maintenance Procedures

Most guide bar problems can be prevented merely by keeping the chain saw well maintained. Incorrect filing and non-uniform cutter and depth gauge settings cause most guide bar problems, primarily resulting in uneven bar wear. As the bar wears unevenly, the rails widen, which may cause chain clatter and difficulty in making straight cuts.

Insufficient guide bar lubrication and operating the saw with chain that is too tight will contribute to rapid bar wear.

To help minimize bar wear, the following guide bar maintenance procedures are recommended:

BAR WEAR - Turn guide bar frequently at regular intervals (for example, after 5 hours of use), to ensure even wear on top and bottom of bar.

BAR GROOVES (B) (Fig. 29)- Bar grooves (or rails which support and carry the chain) should be cleaned if saw has been used heavily or if saw chain appears dirty. Rails should always be cleaned every time saw chain is removed.

OIL PASSAGES (A) (Fig. 29)- Oil passages on the bar should be cleaned to ensure proper lubrication of the bar and chain during operation. This can be done using a soft wire small enough to insert into the oil discharge hole.

NOTE: The condition of the oil passages can be easily checked. If the passages are clear, the chain will automatically give off a spray of oil within seconds of starting the saw. Your saw is equipped with an automatic oiler system.

Cleaning Bar Rails

1. Remove sprocket cover, bar and chain. Refer to the Install the Guide Bar/Saw Chain section.
2. Using a screwdriver, putty knife, wire brush or other similar instrument, clear residue from the rails on the guide bar. This will keep the oil passages open to provide proper lubrication to the bar and chain (Fig. 29).
3. Reinstall the bar, chain, sprocket cover, tighten knob, and chain tension ring. See Section Install the Guide Bar / Saw Chain for more information.

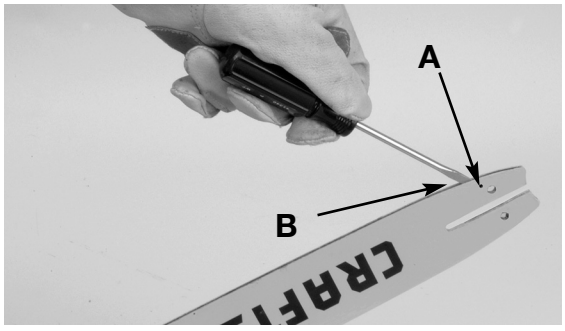


Fig. 29

MAINTENANCE AND REPAIR INSTRUCTIONS

CHAIN MAINTENANCE

WARNING: Unless you have experience and specialized training for dealing with kickback (see Safety Precautions), always use a low-kickback saw chain, which significantly reduces the danger of kickback. Low-kickback saw chain does not completely eliminate kickback. A low-kickback or "safety chain", should never be regarded as total protection against injury.

A low-kickback saw chain should always be used in conjunction with other kickback protection devices such as the Chain Brake®/Hand Guard furnished with your unit.

Always use a replacement saw chain designed as "low-kickback" or a saw chain which meets the low-kickback performance requirements of ANSI (American National Standards Institute).

A standard saw chain (a chain which does not have the kickback reducing guard links) should only be used by an experienced professional chain saw operator.

What is a Low-Kickback Saw Chain?

A low-kickback saw chain is a chain which has met the kickback performance requirements of ANSI B175.1.

By keeping the Chain Brake® and saw chain in good working condition and correctly serviced as recommended in this manual, you will be able to maintain the safety system of your chain saw over the life of the product.

Chain Tension

Check the chain tension frequently and adjust as often as necessary to keep the chain snug on the bar, but loose enough to be pulled around by hand.

Breaking in a New Saw Chain

A new chain and bar will need chain readjustment after as few as 5 cuts. This is normal during the break-in period, and the interval between future adjustments will begin to lengthen quickly.

Over a period of time, however, the moving parts of the saw chain will become worn, resulting in what is called CHAIN STRETCH. This is normal. When it is no longer possible to obtain correct chain tension adjustment, a link will have to be removed to shorten the chain. Take the saw to a Sears or other qualified service dealer.

WARNING: Never have more than 3 links removed from a loop of chain. This could cause damage to the sprocket.

Chain Lubrication

Always make sure the automatic oiler system is working properly. Keep the oil reservoir filled with a high quality Chain, Bar and Sprocket Oil.

Adequate lubrication of the bar and chain during cutting operations is essential to minimize friction with the guide bar.

Never starve the bar and chain of lubricating oil. Running the saw dry or with too little oil will decrease cutting efficiency, shorten saw chain life, cause rapid dulling of chain, and lead to excessive wear of bar from overheating. Too little oil is evidenced by smoke or bar discoloration.

Chain Sharpening

Chain sharpening requires special tools to ensure that cutters are sharpened at the correct angle and depth. For the inexperienced chain saw user, we recommend that the saw chain be professionally sharpened by the nearest Authorized Service Center. If you feel comfortable sharpening your own saw chain, special tools are available from your Authorized Service Center.

WARNING: Never remove, modify or make inoperative any safety device furnished with your unit. The Chain Brake® / Hand Guard and low-kickback saw chain are major safety features provided for your protection.

CHAIN REPLACEMENT INFORMATION

Bar Length	Drive Links	Sears Part #
16"	55 DL	36121

TROUBLESHOOTING

UNIT WILL NOT START

CAUSE	ACTION
1. Unit is unplugged	1. Check cord to make sure it is plugged into an electrical outlet
2. GFCI in outlet has tripped (if used)	2. Reset GFCI

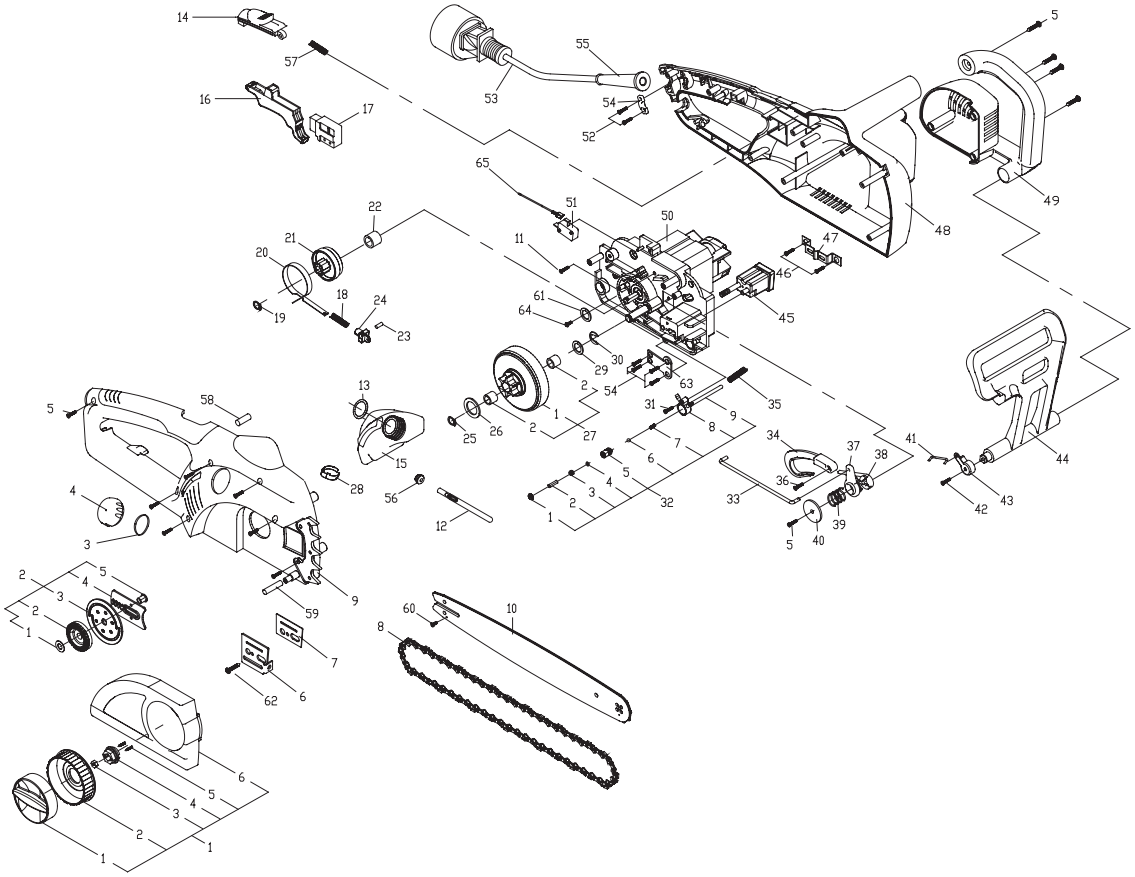
NOTE: For repairs beyond the minor adjusments listed above, contact your nearest Sears Parts & Repair center (1-800-4-MY-HOME®) or other qualified service dealer for an adjustment.

SPECIFICATIONS / FEATURES

Peak H.P..... 3.5
Approximate Weight (with bar and chain) .....11.3 lbs. (5.1 kg)

Features:
Chain Brake/Hand Guard
Double Insulated
TUV Rheinland of North America, Inc. (TUV) Listed
Trigger Lock/Off
Chain Catcher

PARTS LIST



Item	Parts No.	Description	Item	Parts No.	Description	Item	Parts No.	Description
1	6228-211404	SPROCKET COVER ASS'Y	25	66CG-9.5	C RING	49	6086-211501	FRONT HANDLE COVER
2	6228-211504	SPROCKET ASS'Y	26	6014-210502	WASHER	50	6228-211301	MOTOR GEAR BOX ASS'Y
3	6012-210501	WASHER	27	6228-210104	GEAR BEARING ASS'Y	51	6022-211501	SWITCH
4	6017-210103	OIL CAP	28	6077-211501	COVER	52	6SDABB04-10	SCREW
5	6SDABB04-18	SCREW	29	6057-210102	WASHER	53	6011-211502	POWER CORD
6	6043-211302	ADJUSTMENT PLATE	30	6CC-10	C RING	54	6043-840001	STRAIN RELIEF
7	6050-211301	GASKET	31	6SDABB03-18	SCREW	55	6059-855001	CORD GUARD
8	6220-210201	CHAIN	32	6228-210105	OIL PUMP ASS'Y	56	6012-211501	RUBBER STOP
9	6038-211507	HOUSING (R)	33	6188-211501	PULL BAR	57	6024-211506	SPRING
10	9040-310194	BAR	34	6114-211501	PULL PLATE	58	6PC05-14.7	PIN
11	6SDABB04-14	SCREW	35	6024-211507	SPRING	59	6PC4.4-35	PIN
12	6228-211506	OIL PIPE ASS'Y	36	6SQABB04-20	SCREW	60	6SQAB-04-06	SCREW
13	6076-210503	WASHER	37	6181-211501	CLUTCH	61	6WFB-03-12	WASHER
14	6056-211503	SWITCH BUTTON	38	6181-211502	CLUTCH	62	6SDABB03-15	SCREW
15	6066-211501	OIL TANK	39	6024-211503	SPRING	63	6158-211502	PLATE
16	6028-211503	TRIGGER	40	6014-211501	WASHER	64	6SLABB03-06	SCREW
17	6022-211502	SWITCH	41	6154-211301	CONNECTING BAR	65	6010-211301	WIRE
18	6024-211301	SPRING	42	6SDABB4.5-30	SCREW			
19	6CY-08	RING	43	6154-211504	CONNECTOR			
20	6079-211501	SPRING, BRAKE	44	6017-211503	FRONT-HAND GUARD			
21	6073-211501	GEAR	45	6228-211303	FIXED ASS'Y			
22	6059-210201	ADJUSTMENT COVER	46	6SDABB04-16	SCREW			
23	6115-211502	PIN	47	6079-211503	SPRING			
24	6154-211502	CONNECTION	48	6038-211508	HOUSING (L)			

Repair Protection Agreements

Congratulations on making a smart purchase. Your new Craftsman® product is designed and manufactured for years of dependable operation. But like all products, it may require repair from time to time. That's when having a Repair Protection Agreement can save you money and aggravation.

Purchase a Repair Protection Agreement now and protect yourself from unexpected hassle and expense.

Here's what's included in the Agreement:

- ☑ **Expert service** by our 12,000 professional repair specialists
- ☑ **Unlimited service and no charge** for parts and labor on all covered repairs
- ☑ **Product replacement** if your covered product can't be fixed
- ☑ **Discount of 10%** from regular price of service and service-related parts not covered by the agreement; also, 10% off regular price of preventive maintenance check
- ☑ **Fast help by phone -** phone support from a Sears technician on products requiring in-home repair, plus convenient repair scheduling

Once you purchase the Agreement, a simple phone call is all that it takes for you to schedule service. You can call anytime day or night, or schedule a service appointment online.

Sears has over 12,000 professional repair specialists, who have access to over 4.5 million quality parts and accessories. That's the kind of professionalism you can count on to help prolong the life of your new purchase for years to come. Purchase your Repair Protection Agreement today!

Some limitations and exclusions apply.
For prices and additional information call 1-800-827-6655.

Sears Installation Service

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